

## **REMARKS**

### **I. Status of the Application**

At the time of the Action, Claims 1-18 and 37-41 were pending, Claims 19-36 having been withdrawn in response to a restriction requirement. Claims 13 and 40 stand rejected under Section 112, second paragraph for the inclusion of the abbreviation "CMD"; this term has been replaced with the full term "cross machine direction" in Claims 13 and 40, thereby obviating the rejection. Claims 1-3, 8 and 14-18 stand rejected under Section 102(b). Claims 4-7, 9-13 and 37-41 stand rejected under Section 103(a). These rejections are addressed below.

### **II. The Section 102(b) Rejections**

The Action rejects Claims 1-3, 8, 9 and 14-18 as anticipated under Section 102(b) based on U.S. Patent No. 4,187,618 to Diehl (Diehl). The Action states that Diehl discloses a felt having a set of fine top machine direction yarns 13 and coarser bottom machine direction yarns 15 interwoven with fine cross machine direction yarns 20 in a plurality of repeat units. A non-woven batting 25 overlies the top machine direction yarns. The Action further states that each of the fine CMD yarns interweaves with both the top and bottom MD yarns. In citing these recitations of Claim 1, the Action points to Figure 5 and the Abstract of Diehl. Based on these findings, the Action concludes that Diehl anticipates the subject matter of independent Claim 1 under Section 102(b).

In Applicants' prior paper, Applicants argued that the recitation in Claim 1 that there be "a single set of fine cross machine yarns" was not present in Diehl. The Action responds that the set of CMD yarns 20 shown in Diehl are "fine", in that the set of yarns 14 shown in Diehl is "less fine." The Action at page 6. The Action states that "the claims do not preclude the presence of a second set of coarser cross machine direction yarns." *Id.* at 3.

While Applicants disagree with the interpretation of this claim recitation set forth in the Action, nonetheless Applicants have amended Claim 1 (as well as Claims 37 and 41) to clarify that the fabric has a single set of CMD yarns, and that these CMD yarns are fine yarns. Applicants submit that this claim recitation now unambiguously indicates that the fabric has

a single set of CMD yarns, and that this single set of CMD yarns comprises fine CMD yarns. As such, Applicants respectfully submit that Diehl fails to disclose at least this element of Claim 1, and therefore cannot anticipate Claim 1. Accordingly, Applicants respectfully request that the rejections under Section 102(b) be withdrawn.

Applicants further submit that Diehl fails to suggest the recited subject matter. As stated in Applicants' prior paper, nowhere does Diehl suggest a fabric in which each of the CMD yarns interweaves with the top and bottom MD yarns. In fact, Diehl refers to "warp yarns 13 and filler yarns 14" (with the filler yarns 14 being the "coarser" yarns identified in the Action) as comprising an interwoven fabric, and subsequently mentions "strands 15" as being included and held in place with "binders 20" (which are identified in the Action as being the "fine top machine direction yarns). Diehl also states that the binders 20 "are spaced from each other a longitudinal distance which is preferably substantially greater than the corresponding spacing of the filling yarns"; Figures 2 and 3 of Diehl illustrate twice as many CMD yarns 14 as binders 20 in the weave. As such, it is clear that Diehl does not contemplate a fabric in which all of the CMD yarns interweave with both top and bottom MD yarns.

Moreover, Claim 1 is directed to a felt for a fiber cement machine, whereas Diehl is directed to a press felt for a papermaking machine. The specification describes in some detail the fiber cement manufacturing process (*see* the specification at page 5, line 1 to page 6, line 2). In a typical fiber cement forming process, a fiber cement felt picks up fiber cement slurry, transports it over suction boxes, conveys the slurry through a nip, and delivers the nipped slurry, which is relatively thick in size, to a forming roll. In contrast, a press felt for a papermaking machine is typically in contact with the papermaking stock for much less time (ordinarily just when the relatively thin paper web travels through a nip press), and is subjected to extreme pressures. As such, a fiber cement felt experiences considerably different environmental conditions and has quite dissimilar performance parameters than does a papermaking press felt. For example, fiber cement felts typically employ coarse yarns that are an order of magnitude larger than those of a papermaker's press felt. As discussed in the specification, problems presented to fiber cement felt designers include marking of the fiber

cement product caused by the coarse yarns typically employed in fiber cement felts, the "blinding" of openings in the fabric, and compaction of layers of the felt. The use of fine CMD yarns, such as those recited in Claim 1, can assist with these problems, particularly product marking.

As Applicants pointed out previously, Section 103(a) states its inquiry as whether "the differences in the subject matter to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person of ordinary skill in the art to which the subject matter pertains." Thus, in this instance, the proper inquiry is whether it would have been obvious to a designer of fiber cement felts to conceive the subject matter of Claim 1 based on the teachings of Diehl. As discussed in the specification, problems presented to fiber cement felt designers include marking of the fiber cement product caused by the coarse yarns typically employed in fiber cement felts, the "blinding" of openings in the fabric, and compaction of layers of the felt. The use of fine CMD yarns can assist with these problems, particularly product marking. Diehl does not mention these issues nor any technique for addressing them.

In response to this position, the Action states that:

the recitation "fiber cement felt" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are to stand alone. Although Applicant points out differences between papermaking felts and fiber cement felts, none of these differences are represented structurally in the claims.

The Action at 6-7 (citations omitted). In other words, the Action takes the position that, even though the preamble of the claim clearly states that the felt is to be used for fiber cement, the inquiry should be whether a papermaker of ordinary skill would have found it obvious to conceive the claimed subject matter. Applicants are not willing to concede that the recitation of a "fiber cement felt" in the preamble should be disregarded, and in fact believe that the

case law cited in the Action does not stand for this proposition at all.<sup>1</sup> However, even if the term "fiber cement felt" were not given patentable weight, Diehl still fails to render the claimed subject matter obvious. If the obviousness inquiry were posited (incorrectly in Applicants' view) as whether it would have been obvious for one of ordinary skill in the papermaking art to modify Diehl to produce the subject matter of the claims, Applicants firmly submit that it would not have. In such a scenario, the inquiry would become whether one of ordinary skill in papermaking would have modified the papermaker's press felt of Diehl to omit the CMD yarns 14 included therein. Inasmuch as the CMD yarns 14 are clearly the key cross-machine yarn set of the top layer of the Diehl fabric, with the binder yarns 20 only being present to bind the top layer to the "heavy yarns" 15, it is very clear that one of ordinary skill in this art would not modify Diehl by omitting the CMD yarns 14; doing so would produce an inoperable fabric. Thus, even if the term "fiber cement felt" is not given patentable weight, Applicants submit that the claimed subject matter still defines over Diehl.

### **III The Section 103(a) Rejections**

The Action rejects Claims 4-7, 9-13 and 37-40 under Section 103(a) as obvious based on Diehl in view of U.S. Patent No. 6,175,996 to Gstrein (Gstrein). The Action further rejects Claim 41 based on Diehl in view of U.S. Patent No. 4,503,113 to Smart (Smart).

Gstrein, which is also directed to a papermaking press felt, is cited as disclosing certain features of press felts. With regard to independent claim 37, the Action states that Gstrein "teaches that duplex and triplex fabrics are both known in the felt art and are equally useful." The Action at page 5. However, Gstrein does not disclose or suggest a triple layer fabric that has only one set of CMD yarns; in fact, typical triplex fabrics have multiple CMD yarn sets that do not interweave with all three different layers of MD yarns. Thus, in addition to the reasons set forth above with respect to Claim 1, Claim 37 defines over the art of record for at least this additional reason.

Turning now to Claim 41, the Action concedes that Diehl fails to disclose a ratio of

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<sup>1</sup> *Kropa v. Robie*, 187 F.2d 150 (C.C.P.A. 1951) discusses the impact of the preamble on claim interpretation, and in fact holds that the term "an abrasive article" included in the preamble of a claim should be given patentable weight, because "it is only by that phrase that it can be known that the subject matter defined by the

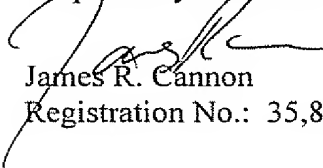
fine top MD yarns and coarse bottom MD yarns of between about 3:1 and 5:1. The Action cites Smart for the teaching of a top MD/bottom MD ratio of 2:1 to 4:1, and concludes that the subject matter of Claim 41 would be obvious based on the combination of Diehl and Smart.

In response, Applicants note that the fabric disclosed in Smart is a stratified double layer fabric, with the top layer including a duplex fabric (with two levels of MD yarns interlaced with one CMD yarn set) and a separate simplex fabric (with one level of MD yarns interlaced with one CMD yarn set). The separate layers are bound together only by the stitching of bottom CMD yarns 15 with the lower level MD yarns of 10. Because the fabric in Smart is a stratified fabric, in which no CMD yarn interweaves with all of the different levels of MD yarns, a teaching in Smart that the MD yarn ratio of the top fabric layer to the bottom fabric layer is between 2:1 and 4:1 does not suggest that a similar ratio be used in a fabric in which a single set of CMD yarns interweaves with all of the MD yarns. Thus, the subject matter of this claim is free of the cited art for this reason in addition to the reasons set forth in connection with Claim 1.

#### IV. Conclusion

Accordingly, Applicant submits that the present application is in condition for allowance and the same is earnestly solicited. Should the Examiner have any small matters outstanding of resolution, he is encouraged to telephone the undersigned at 919-854-1400 for expeditious handling.

Respectfully submitted,



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**CERTIFICATION OF TRANSMISSION**

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Signature: Joyce Paoli  
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